What is claimed is:

[Claim 1] 1. An electromechanical tactile cell assembly comprising:

a plurality of piezoelectric element reeds, each one of the piezoelectric element reeds being bendable at an elongated end portion when a voltage is applied to the reed;
a plurality of conductive fulcrum pins secured to a printed circuit board; and
a plurality of multiple element conductive supports secured to a printed circuit board, each multiple element conductive support, in combination with the plurality of conductive fulcrum pins, adapted to secure a plurality of piezoelectric reeds, corresponding to the plurality of conductive fulcrum pins, to the printed circuit board.

[Claim 2] 2. The electromechanical tactile cell assembly of claim 1, wherein the piezoelectric element reed is a bimorph.

[Claim 3] 3. The electromechanical tactile cell assembly of claim 1, wherein the piezoelectric element reed is a parallel polled bimorph.

[Claim 4] 4. The electromechanical tactile cell assembly of claim 1, wherein the piezoelectric element reed is a series polled bimorph.

[Claim 5] 5. The electromechanical tactile cell assembly of claim 1, wherein the piezoelectric element reed further comprises a top piezoelectric plate, a bottom piezoelectric plate, and a conductive strip positioned between the top plate and the bottom plate and insulated therefrom, the conductive strip extending beyond the top plate and the bottom plate at a first end of the reed.

[Claim 6] 6. The electromechanical tactile cell assembly of claim 5, wherein the piezoelectric element reed is conductively secured to the printed circuit board at a first end of the reed.

[Claim 7] 7. The electromechanical tactile cell assembly of claim 1, wherein the piezoelectric element reeds are of substantially equal length, and wherein the piezoelectric element reeds are secured to the printed circuit board in a stepped pattern in a common bending plane.

[Claim 8] 8. The electromechanical tactile cell assembly of claim 1, wherein the plurality of multiple element conductive supports further comprises:

a conductive base; and
a plurality of conductive flexion members integral to the conductive base.

[Claim 9] 9. The electromechanical tactile cell assembly of claim 8, wherein the plurality of conductive flexion members further comprises an

arm including a substantially convex portion, the convex portion biased in a direction to contact the piezoelectric element reed.

[Claim 10] 10. The electromechanical tactile assembly of claim 8, wherein the plurality of conductive flexion members are arranged in a stepped pattern relative to the conductive base.

[Claim 11] 11. The electromechanical tactile cell assembly of claim 5, further comprising a first electrical contact surface coincident with the top plate and a second electrical contact surface coincident with the bottom plate.

[Claim 12] 12. The electromechanical tactile cell assembly of claim 11, wherein each multiple element conductive support is in contact with the first electrical contact surface and each of the plurality of conductive fulcrum pins is in contact with the second electrical contact surface, such that the piezoelectric reed is secured to the printed circuit board.

[Claim 13] 13. The electromechanical tactile cell assembly of claim 11, wherein each multiple element conductive support is in contact with the second electrical contact surface and each of the plurality of conductive fulcrum pins is in contact with the first electrical contact surface, such that the piezoelectric reed is secured to the printed circuit board.

[Claim 14] 14. The electromechanical tactile cell assembly of claim 1, further comprising:

the plurality of conductive fulcrum pins includes a first plurality of fulcrum pins secured to a first side of the printed circuit board and a second plurality of fulcrum pins secured to a second side of the printed circuit board; and
the plurality of multiple element conductive supports includes a first plurality of multiple element conductive supports secured to the first side of the printed circuit board and a second plurality of multiple element conductive supports secured to the second side of the printed circuit board.

[Claim 15] 15. The electromechanical tactile cell assembly of claim 1, further comprising a removable piezoelectric element negative stop assembly.

[Claim 16] 16. The electromechanical tactile cell assembly of claim 15, wherein the removable negative stop assembly further comprises a plurality of negative stop elements corresponding to each of a plurality of piezoelectric elements, the plurality of negative stop elements integral with the removable negative stop assembly.

[Claim 17] 17. The electromechanical tactile cell assembly of claim 15, wherein the removal piezoelectric element negative stop is fabricated of an insulative material.

[Claim 18] 18. The electromechanical tactile cell assembly of claim 15, wherein the removable piezoelectric element negative stop is positioned proximate to the elongated end portion of the plurality of piezoelectric element reeds.

[Claim 19] 19. The electromechanical tactile assembly of claim 16, wherein the removable negative stop assembly further comprises a first thin cylindrical portion and first disc portion, a second cylindrical portion and a second disc portion, a third cylindrical portion and a third disc portion and a fourth cylindrical portion, such that the disc portions are positionable between the piezoelectric element reeds.

[Claim 20] 20. The electromechanical tactile cell assembly of claim 1, further comprising:

a bus connector adapted to secure the Braille cell assembly to a frame; and
a serial to parallel converter in circuit communication with the bus connector, to receive serial input data from the bus connector for actuation of the plurality of piezoelectric element reeds.

[Claim 21] 21. The electromechanical tactile cell assembly of claim 1, further comprising:

a plurality of tactile pins, each of the plurality of tactile pins corresponding to each of the plurality of piezoelectric elements reeds; and
a respective one of the plurality of tactile pins being vertically movable, in response to a bending movement of a corresponding one of the plurality of piezoelectric element reeds.

[Claim 22] 22. The electromechanical tactile cell assembly of claim 21, wherein the movement of the plurality of tactile pins provides a tactile Braille display.

[Claim 23] 23. An electromechanical tactile cell assembly comprising:

a plurality of piezoelectric elements;
a plurality of multiple element conductive supports conductively securing said plurality of piezoelectric elements to a printed circuit board; and
a plurality of pin elements secured to the printed circuit board, each of said plurality of pin elements slightly offset from a corresponding one of said plurality of multiple element conductive supports thereby creating a fulcrum, each of said plurality of pin elements, in combination with the corresponding one of said plurality of multiple

element conductive supports adapted to conductively secure said plurality of piezoelectric elements to the printed circuit board.

[Claim 24] 24. The electromechanical tactile cell assembly of claim 23, wherein the offset is about 0.22mm.